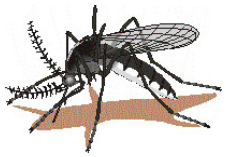
STORMWATER MANAGEMENT & MOSQUITO ISSUES



Clearly, any standing water has the potential to promote mosquito growth. Some stormwater management practices use ponded water to promote water quality improvement. Therefore, there is the potential for contributing to mosquito problems. However, stormwater management is essential to mitigate the adverse effects of development on the environment. These effects include increased flooding, water quality impairment, reduced groundwater recharge, and stream channel erosion.

Maintenance of constructed facilities is of paramount importance to their function. The State and local governments make efforts to inspect both publicly and privately owned stormwater management facilities. These efforts can certainly improve. A greater public awareness of the value of these facilities will help in making increased funding available so that better maintenance can be achieved. A lack of maintenance typically results in diminished pond performance, poor drainage, and promotes mosquito population growth. Temporary sediment and erosion control measures employed during construction also benefit from increased maintenance activity.

The State of Maryland revised its stormwater management regulations in the year 2000. Included in the revisions were changes in design requirements that reduce the potential for mosquito breeding. Specific changes include:

- **Greater flexibility of practice selection based on site specific conditions.** Previously, certain practices were required because it was believed they would provide the greatest improvement to water quality. Over time it became evident that site conditions had a significant influence on practice performance. Forcing a specific practice to be used where it was impractical often led to poor drainage and eventually failure. Using the appropriate practice will result in less frequent occurrences of poor drainage and stagnant water.

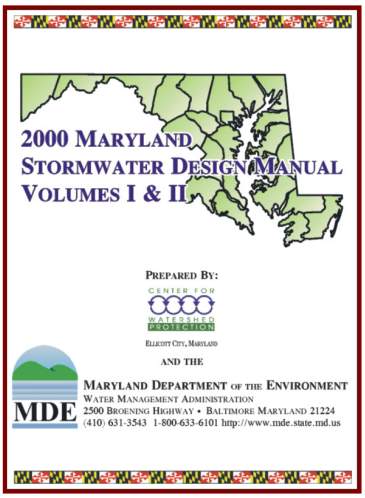
- **Improved drainage performance.** Not all stormwater management practices require extended ponding of water. Any practice that is not designed with a permanent pool is required to drain within 48 hours after a storm event. If a practice does involve longer retention times, then features are to be incorporated to promote mixing of incoming runoff and reduce stagnation.

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Improving the design of permanent pools. Research clearly shows that varying the depths of permanent pools reduces mosquito breeding habitat. Portions of all new ponds have to be a minimum of 4 feet deep. Other areas of ponds that have varying shallower depths are to be planted with aquatic vegetation. This results in habitat for natural predators of mosquitoes such as dragonflies, birds, fish, and frogs.

Encouraging better site design practices that reduce the need for structural stormwater management features. Development alters natural drainage and creates the need for stormwater management. Following new design criteria minimizes the generation of pollutants and reduces the concentration of runoff. Following the nonstructural measures promoted by the State in some cases can eliminate the need for a pond altogether.



For more help & information on West Nile Virus…

- **State Mosquito Control Program: 410-841-5870**
  Maryland Department of Agriculture - Mosquito Control Section
- **Maryland Department of Health & Mental Hygiene:**
  www.edcp.org/html/west_nile.html

In summary, Maryland has made efforts to improve stormwater management practices to reduce the potential for mosquito problems. If you have any additional questions please contact Charlie Wallis of the Nonpoint Source Program of the Maryland Department of the Environment at 410–537–3543 or email at cwallis@mde.state.md.us.